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EXAMINER	
SALCE, JASON P	

ART UNIT	PAPER NUMBER
2611	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/336,699	Applicant(s) MARUYA ET AL.	
	Examiner Jason P Salce	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-42 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) 3,4,13-17,20-25,27 and 39 is/are allowed.

6)☒ Claim(s) 1,2,5-12,18,19,29-38 and 40-42 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-2, 5-12, 18-19, 29-38 and 40-42 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2, 5-7, 9-12, 18-19, 29, 31-38 and 40-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramasubramanian et al. (U.S. Patent No. 6,172,672) in view of Chaddha (U.S. Patent No. 5,621,660).

Referring to claim 1, Ramasubramanian discloses presenting, at a client terminal, a video program stored in a server (see elements 102, 110 and 112 in Figure 1A and Column 3, Lines 54-56 and Column 4, Lines 1-2) linked with the client terminal via transmission path of a limited transmission bandwidth, wherein each frame of the video program comprises a basic and level of quality supplement data portions (see Column 7, Lines 13-20).

Ramasubramanian also discloses in response to a play command from a user, determining a start position in the video program (see Column 7, Lines 40-45 for requested the beginning of a video to be played). The examiner notes that

the start of the video would inherently have to be determined if a request is made to play the video from its beginning point.

Ramasubramanian also discloses in response to the play command from the user, obtaining and using the basic data portions for playing the video program (see again Column 7, Lines 40-45 for displaying a video upon a play request from the client, and also note Column 7, Lines 45-52 for sending the compressed video program (lower quality, which will be equivalent to the "basic data portions").

Ramasubramanian also discloses in response to a stop command, obtaining and using said at least one level of quality supplement data portions of a last displayed frame for displaying a quality enhanced version of said last displayed frame (see Column 4, Lines 41-51 for encoding a video stream in response to a certain user interaction, such as various well known trick play events and Column 6, Lines 48-51 resuming play of a video after one of the trick play events (slow motion in this example), and when play is resumed switching back to the basic data portions (highly compressed video)).

Ramasubramanian fails to disclose that the process of adding a quality supplement data portion to the basic data portion enhances the quality-enhanced version played at the client.

Chaddha discloses that at the receiving end of a scaleable video network with trick play functionality (see Column 10, Lines 36-44), receiving various frames, which represent a specific level of video quality, and when a high resolution is needed, adding the basic portion (160x120 resolution frame) to the

quality supplemental portion (320x240 resolution frame) (see Column 9, Lines 21-44).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the receiver for presenting a higher quality video to a user upon a trick play event, as taught by Ramasubramanian, utilizing the adding of the basic portion and quality supplemental portion of the multiple layers of image quality, as taught by Chaddha, for the purpose of providing a bit stream that is easily rescaled by dropping less important bits, thus providing bandwidth scalability dynamic range from a few Kbps to many Mbps (see Column 3, Lines 28-33 of Chaddha).

Claim 2 corresponds to claim 1, where Ramasubramanian discloses that in response to a jump forward command, for obtaining and using said at least one level of quality supplement data portions of a last displayed frame for displaying a quality-enhanced version of the last displayed frame (see Column 7, Lines 4-12 for using a jump forward command to find a last displayed frame and request an enhanced version of that last displayed frame). Also note the rejection of claim 1 for adding the basic and quality supplement portions.

Referring to claims 5-6, see rejection of claims 3-4, respectively.

Referring to claim 7, Ramasubramanian discloses storing said basic data portion and said at least one level of said quality supplement data portions on a single recording media (see element 124 in Figure 1 and Column 7, Lines 13-17), said quality supplement data portions for each frame having a constant data

quality (see Column 7, Lines 16-17 for each version of different qualities having a specific compression ratio).

Ramasubramanian also discloses in response to a quality supplement data request for a specified frame from said client terminal, reading said quality supplement data portions for said specified frame (see Column 6, Lines 55-67 and Column 7, Lines 1-3).

Chaddha discloses storing media on a disk in two distinct areas of a single recording medium (see Column 7, Lines 8-9 for storing the data portions on a single disk subsystem 90, which is a single recording medium) in a predetermined frame order (see Column 7, Lines 11-13 for storing the base layer data (frames) in hierarchical order, which is a predetermined frame order). Chaddha also discloses that a quantity of the quality supplemental portion for each frame being M times a quantity of the corresponding basic data portion so as to be able to read each quality supplement data portion according to positional information of the corresponding basic data portion (see Column 5, Lines 3-22 for the base layer having 160x120 a resolution and an enhancement layer having a 320x240 resolution, which is 2 times the quantity of the base layer and Column 7, Lines 54-56 for a RAID system where the data is stripped across a single recording medium (as discussed above) in fixed units). Therefore, since the quantity of the base and enhancements layers are a multiple of the base layer, and all of the data resides on the RAID disk storage subsystem 90, then the position of the enhancement layer on a disk can be determined by multiplying the base layer by a multiple M. For preparing the quality supplement data in

response to a stop command, see the rejection of claim 1. The examiner also notes that the limitation of a "single recording medium" is broad, and can be interpreted as a single disk or multiple disked used in a RAID system, which takes multiple disks and spreads the data evenly across all disks creating a single disk out of many (see Column 7, Lines 41-42 of Chaddha).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the storage device 124 in Figure 1, using the RAID system with base layer and co-located enhancement layers, for the purpose of removing any restriction on the number of active users of a given video title (see Column 7, Lines 48-49 of Chaddha).

Claim 9 corresponds to claim 1, where all of the limitations corresponding to receiving basic and supplemental portions of data according to a play or stop (pause) command are disclosed in the rejection of claim 1.

Ramasubramanian discloses in response to playing a basic data portion, skipping said quality supplement data portions (see Column 4, Lines 55-63 to display a basic data portion during playback, which contains a specific level of quality). Therefore, the system inherently skips the quality supplement data portions, as the basic portions of the requested video is playing.

Further, Chaddha discloses storing media on a disk in two distinct areas of a single recording medium (see Column 7, Lines 8-9 for storing the data portions on a single disk subsystem 90, which is a single recording medium). The examiner also notes that the limitation of a "single recording medium" is broad, and can be interpreted as a single disk or multiple disked used in a RAID system,

which takes multiple disks and spreads the data evenly across all disks creating a single disk out of many (see Column 7, Lines 41-42 of Chaddha).

Chaddha fails to teach storing the basic and supplemental data portions on successive areas on a disk. The examiner takes Official Notice that it is well known to store data on a disk in successive areas, for the purpose of providing faster access to the initial data by allowing the system to know that another piece of data directly follows the initial piece of data.

Claims 10-12 corresponds to claim 1 and 10, respectively, where Chaddha discloses passing basic data portions to a decoder and adding the supplement data portion includes passing the quality supplement data portion to the decoder (see Figure 2 and the rejection of claim 1), but fails to disclose that each frame of the video program has been coded according to a coding standard (MPEG or H.263), wherein the program comprises independent frames that can be decoded alone without the need of other frame data and different frames that can not be decoded without other frame data (I, P and B frames of the MPEG standard). The examiner takes Official Notice that it is well known to use such coding techniques.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the video sent from the server in Figure 1, by using a video coding technique to encode the video, for the purpose of providing smaller files, which enhances the speed of transmission and less occupancy of the bandwidth.

Referring to claim 18-19, see rejection of claims 1-2, respectively.

Referring to claim 29, see the rejection of claims 1 and 7.

Referring to claim 30, see the rejection of claims 1 and 8.

Referring to claim 31, see the rejection of claims 1 and 9.

Referring to claims 32-34, see the rejection of claims 10-12, respectively.

Referring to claims 35, 37 and 40-42, see the rejection of claim 1, where Chaddha discloses adding supplement portions of higher resolution frames to a basic portion in order to obtain a higher quality image.

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3. Claims 8 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramasubramanian et al. (U.S. Patent No. 6,172,672) in view of Chaddha (U.S. Patent No. 5,621,660) in further view of Emura (U.S. Patent No. 5,732,217).

Referring to claim 8, Chaddha discloses storing media on a disk in two distinct areas of a single recording medium (see Column 7, Lines 8-9 for storing the data portions on a single disk subsystem 90, which is a single recording medium). The examiner also notes that the limitation of a "single recording medium" is broad, and can be interpreted as a single disk or multiple disked used in a RAID system, which takes multiple disks and spreads the data evenly across all disks creating a single disk out of many (see Column 7, Lines 41-42 of Chaddha).

Ramasubramanian also discloses in response to a quality supplement data request for a specified frame from said client terminal, reading said quality

supplement data portions for said specified frame (see Column 6, Lines 55-67 and Column 7, Lines 1-3).

Ramasubramanian fails to disclose the use of a start address of the quality supplement data portions for each frame. Emura discloses accessing video data at a server where the data on the storage device at the server is accessed using a start address (keyframe address) (see Figure 1 and Column 2, Lines 20-32). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the single recorded medium at the server that stores the basic and quality portions of the data, as taught by Ramasubramanian and Chaddha, using the start address for the data in the storage device at the server, for the purpose of providing high-speed playback being performed at a correct speed in either forward or backward directions (see Column 9, Lines 15-17 of Emura).

Allowable Subject Matter

4. Claims 3-4, 13-17, 20-25, 27 and 39 are allowed.

The following is an examiner's statement of reasons for allowance:

Referring to claims 3-4, 25, 27 and 39, the prior art of record fails to anticipate or rendered obvious the supplemental quality enhancement storage and transmission system, as disclosed in independent claim 1, that provides the storage of the basic and supplement data portions on separate tape storage mediums. Ramasubramanian only discloses that the basic and supplement data portions are stored on a storage device and is silent to either a disk storage

system or a tape storage system (see Figure 1A-1B). Chaddha discloses offloading lower resolution versions of the video to tape, but keeps the higher resolutions of the video on the disk subsystem 90, therefore only the basic portions are stored on a tape recording medium. Therefore Ramasubramanian and Chaddha both fail to disclose storing the basic portions on a tape recording medium and the quality supplement portions on a different tape recording medium.

Referring to claims 13-17 and 20-24, the prior art of record fails to anticipate or rendered obvious determining a time count in a multimedia program according to a specific play control command (e.g. fast-forward, rewind or pause trick play commands) and in response to one of the play control commands issued during a stop period, determining whether there is a video object to be displayed at said time count in the multimedia program. Ramasubramanian only teaches issuing a play control command and receiving supplement data portions in response thereto, where Chaddha teaches the improvement of specifically enhancing the basic portion and supplement portion by adding the two portions together. Ramasubramanian and Chaddha both fail to disclose a time count in the multimedia program, as well as determining whether there is a video object in the multimedia program after a play control command is issued during a stop period.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should

preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

5. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P Salce whose telephone number is (703) 305-1824. The examiner can normally be reached on M-Th 8am-6pm (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on (703) 305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 2, 2004

VIVEK SRIVASTAVA
PRIMARY EXAMINER